

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A superconducting wire rod filled with or interiorly including a first superconductor containing magnesium diboride (MgB_2) and a sheath layer formed over the first superconductor, the sheath layer comprising a niobium titanium superconducting material, wherein a metal powder is added to a super-conducting material included in the superconducting wire rod, the metal powder is selected from at least one of indium, tin, and lead, the metal power having an average grain diameter equal to or less than $20\ \mu m$ is 5 to 25 vol% dispersed in the superconducting material, a density of the superconducting material included in the superconducting wire rod after a final work is equal to or more than 90% a theoretical density, and a critical current density is equal to or more than $1000\ A/cm^2$.

2. (Previously Presented) A superconducting wire rod as claimed in claim 1, wherein a defect portion having an area equal to or more than $10\ mm^2$ does not exist over an entire length of the superconducting wire rod, on a surface of the superconducting wire rod.

3. (Previously Presented) A superconducting wire rod as claimed in claim 1, having an allowable bending strain rate ϵ of 0.8% or more, wherein ϵ is defined as $\epsilon = t/2r \times 100$, wherein t is the entire thickness of the superconducting

wire, and r is the radius of bending, and wherein the superconducting wire, when bent, is capable of maintaining at least 90% of the critical current density when no bending is applied to the wire rod.

4. (Previously Presented) A superconducting wire rod as claimed in claim 1, wherein the first superconductor containing magnesium diboride (MgB_2) is complexed with a second superconductor.

5. (Previously Presented) A superconducting wire rod as claimed in claim 4, wherein the second superconductor is a niobium titanium superconductor.

6. (Withdrawn) A connection for connecting a first superconducting wire rod with a second superconducting rod wherein the connection is achieved by bringing one end of the first rod in close proximity to one end of the second rod, and applying or coating the ends with MgB_2 powder magnesium diboride.

7. (Withdrawn) A method of producing a superconducting wire rod comprising:

a step of mixing a metal powder having an average grain diameter equal to or less than 20 μm and selected from at least one of an indium, a tin, a lead, an iron, a magnesium and an aluminum of 5 to 25 vol% to a superconducting powder containing a boron so as to produce a mixed powder;

a step of charging said mixed powder to a metal pipe; and

a step of wiring and/or rolling said metal pipe,

wherein a density of a superconducting material contained in the superconducting wire rod after a final process is equal to or more than 90%, and a critical current density is equal to or more than 1000 A/cm².